

CLAIMS

1-36. (canceled)

37. (new) Circuitry including an electrical over stress (EOS) shunt connected between a first rail and a second rail of the circuitry, the EOS shunt comprising:
a switchable low-resistance path connected between the first and second rails; and
a voltage threshold detector comprising a plurality of series-connected diodes connected in series with a resistor between the first and second rails, wherein:
the voltage threshold detector is coupled to turn on and off the switchable low-resistance path based on relative voltage levels of the first and second rails; and
the voltage threshold detector further comprises at least one switch connected to selectively bypass at least one of the series-connected diodes.

38. (new) The circuitry of claim 37, wherein:
the first rail is a power rail; and
the second rail is a ground rail.

39. (new) The circuitry of claim 37, wherein the circuitry is implemented in a single integrated circuit.

40. (new) The circuitry of claim 37, further comprising an electrostatic discharge (ESD) shunt connected between the first and second rails in parallel with the EOS shunt, wherein:
the ESD shunt is designed to protect the circuitry from ESD events; and
the EOS shunt is designed to protect the circuitry from EOS events having durations longer than the ESD events.

41. (new) The circuitry of claim 37, wherein bypassing one or more of the series-connected diodes changes the relative voltage levels at which the switchable low-resistance path is turned on.

42. (new) The circuitry of claim 37, wherein the voltage threshold detector comprises at least two switches connected to selectively bypass up to at least two of the series-connected diodes.

43. (new) The circuitry of claim 37, wherein the resistor is a programmable resistor whose resistance can be selectively changed when the at least one series-connected diode is bypassed.

1 44. (new) The circuitry of claim 37, wherein the EOS shunt further comprises a driver
2 connected between the voltage threshold detector and the switchable low-resistance path.

1 45. (new) The circuitry of claim 44, wherein the driver comprises one or more series-
2 connected inverters.

1 46. (new) The circuitry of claim 37, wherein the switchable low-resistance path comprises a
2 transistor whose channel is connected between the first and second rails and whose gate is coupled to the
3 voltage threshold detector.

1 47. (new) The circuitry of claim 37, further comprising a Firewire IEEE 1394 interface.

1 48. (new) The circuitry of claim 37, wherein:
2 the first rail is a power rail;
3 the second rail is a ground rail;
4 the circuitry is implemented in a single integrated circuit;
5 the circuitry further comprises an ESD shunt connected between the first and second rails in
6 parallel with the EOS shunt, wherein:
7 the ESD shunt is designed to protect the circuitry from ESD events; and
8 the EOS shunt is designed to protect the circuitry from EOS events having durations
9 longer than the ESD events;
10 bypassing one or more of the series-connected diodes changes the relative voltage levels at which
11 the switchable low-resistance path is turned on;
12 the resistor is a programmable resistor whose resistance can be selectively changed when the at
13 least one series-connected diode is bypassed;
14 the EOS shunt further comprises a driver connected between the voltage threshold detector and
15 the switchable low-resistance path, wherein the driver comprises one or more series-connected inverters;
16 and
17 the switchable low-resistance path comprises a transistor whose channel is connected between
18 the first and second rails and whose gate is coupled to the voltage threshold detector.

1 49. (new) The circuitry of claim 48, wherein the voltage threshold detector comprises at
2 least two switches connected to selectively bypass up to at least two of the series-connected diodes.

1 50. (new) The circuitry of claim 48, further comprising a Firewire IEEE 1394 interface.